Message

From: Grundler, Christopher [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D3BE58C2CC8545D88CF74F3896D4460F-GRUNDLER, CHRISTOPHER]

Sent: 11/15/2016 4:58:06 PM

To: McCabe, Janet [/o=ExchangeLabs/ou=Exchange Administrative Group

(FYDIBOHF23SPDLT)/cn=Recipients/cn=d2ca413e5a534895bd6042d82e5b5f63-McCabe, Janet]

Subject: FW: Chrysler Accused of VW-Like Emissions Cheating (BNA)

Fyi—new class action lawsuit regarding preSCR trucks (NOT the ones we've been discussing). the trucks at issue in this new class action suit have been the subject of numerous recalls for defects

From: Bunker, Byron

Sent: Tuesday, November 15, 2016 11:38 AM

To: Grundler, Christopher <grundler.christopher@epa.gov>

Cc: Cook, Leila <cook.leila@epa.gov>; Brooks, Phillip <Brooks.Phillip@epa.gov>; Belser, Evan <Belser.Evan@epa.gov>; Wehrly, Linc <wehrly.linc@epa.gov>; Ball, Joel <ball.joel@epa.gov>; Dalton, Joel <Dalton.Joel@epa.gov>; Cohen, Janet <cohen.janet@epa.gov>

Subject: RE: Chrysler Accused of VW-Like Emissions Cheating (BNA)

Chris,

Copied below is the summary from the lawsuit on the nature of the "emissions deception" (thanks Phil). The whole lawsuit is some 700 pages long, but this is the main summary of what they are saying about the vehicle. The highlighting is mine. That language looks like a defect issue rather than defeat device, but obviously this is just conjecture on the part of the litigants. Joel Ball has looked into the recall history and sees that these vehicles have had four emissions recalls during this time period including several that appears to be related to significant DPF regeneration issues. Environment & Climate Change Canada has one of these vehicles. We will coordinate with them to get more information on the testing they have started.

We will keep you in the loop as we learn more. At this point, this is in the que behind FCA 3.0l, Mercedes 2.1l & 3.0l, and the Audi automatic transmission issue.

Thanks,

Byron

7. Defendants' Emissions Deception

102. The Affected Vehicles contain a sophisticated NOx reduction aftertreatment technology called a NOx adsorber. This technology is intended to reduce oxides of nitrogen (NOx) contained in the exhaust of the engine to levels sufficient to allow the vehicle to meet State and Federal emission certification requirements.

103. The NOx adsorber is a catalytic device that operates in two distinct modes: 1) NOx adsorption mode; and 2) NOx regeneration/reduction mode. During adsorption mode, NOx present in the diesel exhaust from the engine chemically binds to the surface of the NOx adsorber catalyst, effectively trapping or storing the NOx. However, the NOx adsorber has a limited capacity for storing NOx, and once the system is saturated (i.e., full), it must be regenerated. A NOx sensor monitors the NOx levels coming out of the adsorber and can detect when NOx adsorber system has reached its capacity.

104. Once it is determined that the NOx adsorber is at or near saturation, the engine control system switches to a "regeneration mode." In this mode, the engine is operated in a fuel rich mode, eliminating excess oxygen and increasing levels of hydrocarbon from unburned fuel. In the absence of oxygen the hydrocarbons react with the NOx in a "reduction" reaction to desorb the NOx and convert it to harmless nitrogen, oxygen, water, and carbon dioxide.

- 105. The NOx sensors and other engine and exhaust system sensors feed information to the engine control unit (ECU). Complex algorithms and control strategies coded in the ECU monitor the status of the adsorber system. When the need for a regeneration is detected, the ECU manages and adjusts operational parameters to switch from adsorption mode to regeneration/reduction mode.
- 106. The system is further complicated by the fact that a diesel particulate filter (DPF) system used to trap and oxidize particulate matter (aka soot) must also be monitored and controlled in a similar fashion, but usually at a different frequency of occurrence.
- 107. Testing was performed on a 2012 Dodge Ram 2500 powered by a Cummins 6.7 diesel engine using a portable emission measurement system (PEMS). The vehicle had accumulated approximately 70,000 miles at the time of testing. The results show the vehicle does not meet the relevant emission standards, as follows: During on-road testing designed to simulate the driving profile of the Federal Test Procedure (FTP) certification cycle, emissions were found to be 702 mg/mile on average, 3.5 times the federal and California standard of 200 mg/mile. Over significant distances, emissions were found to be as high as 1,100 to 2,800 mg/mile for periods lasting as long as 21% of the total drive time. That is 5.5 to 14 times the relevant standard. During on-road PEMS testing designed to simulate the driving profile of the Highway certification cycle, average emissions were found to be 756 mg/mile, or 1.9 times the California (and Section 177 state) standard. Over significant distances, emissions were found to be as high as 1,200 to 2,250 mg/mile for periods lasting as long as 16% of the total drive time. That equates to 3.0 to 5.6 times the relevant standard.
- 108. The vehicle was also found to be particularly sensitive to hills, where steady speed emissions could spike as high as 2,100 mg/mile (5.5 times the standard) on a steady 1.5% grade.
- 109. The excess emissions are believed to result from excessive DPF active regeneration in combination with deactivated NOx adsorber catalyst. The need for excessive DPF regeneration events and lower overall activity of the NOx adsorber catalyst also lead to increased fuel consumption and shortened engine component life.
- 110. Furthermore, the need for frequent regenerations was measured to reduce the overall fuel economy of the vehicle by 3-4%.
- 111. In addition, the Cummins engine certification required on-board diagnostics that must be able to monitor NOx levels. If the NOx levels exceed certain limits service lights and potential engine derate strategies are to be deployed to motivate the operator to have the vehicle inspected and/or serviced. At no time during the testing were any diagnostic indicators or engine derating observed.
- 112. These test results are consistent with those found by researchers who prepared the "CAFEE Report" that led to the uncovering of the Volkswagen scandal. There researchers from West Virginia University studied the emissions performance of a NOx adsorber-equipped passenger car during DPF regeneration. Testing revealed that during regeneration events there was an increase in NOx

emissions by 97%. The authors also found particulate matter was found to exceed the European standards during DPF regeneration events by two to three orders of magnitude.

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From: Grundler, Christopher

Sent: Monday, November 14, 2016 4:59 PM **To:** Bunker, Byron bunker.byron@epa.gov>

Subject: RE: Chrysler Accused of VW-Like Emissions Cheating (BNA)

thanks

rom: Bunker, Byron

Sent: Monday, November 14, 2016 4:54 PM

To: Grundler, Christopher <grundler.christopher@epa.gov>

Subject: RE: Chrysler Accused of VW-Like Emissions Cheating (BNA)

Note this is the pre-SCR products (2007-12 Lean NOx Traps). We haven't looked at those in a long time but will see how we can follow up on this. I can't tell from the reporting if this is a durability issue or a defeat device or

We will find out.

Thanks,

Byron

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From: Grundler, Christopher

Sent: Monday, November 14, 2016 4:50 PM **To:** Bunker, Byron <<u>bunker.byron@epa.gov</u>>

Subject: Fwd: Chrysler Accused of VW-Like Emissions Cheating (BNA)

Christopher Grundler, Director Office of Transportation and Air Quality U.S. Environmental Protection Agency 202/564-1682 (Washington DC) 734/214-4207 (Ann Arbor MI)

Begin forwarded message:

From: "Phillips, Anna" < Phillips.Anna@epa.gov>
Date: November 14, 2016 at 4:27:31 PM EST

To: "Grundler, Christopher" < grundler.christopher@epa.gov>, "Blubaugh, Jim"

< Blubaugh.Jim@epa.gov>, "Bunker, Byron" < bunker.byron@epa.gov>, "Belser, Evan"

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< <u>Valentine.Julia@epa.gov</u>>, "Birgfeld, Erin" < <u>Birgfeld.Erin@epa.gov</u>>

Subject: Chrysler Accused of VW-Like Emissions Cheating (BNA)

Chrysler Accused of VW-Like Emissions Cheating

Posted November 14, 2016, 12:41 P.M. ET

By Kartikay Mehrotra

Allegations of cheating pollution standards reach U.S. automakers as Chrysler is sued by consumers who say engines in some Dodge trucks were rigged to hide that emissions were as much as 14 times higher than permitted by law.

The Michigan-based unit of Fiat Chrysler Automobiles NV is the first U.S. carmaker to be sued by consumers. Similar claims were made against German carmakers. Volkswagen AG admitted that it installed devices designed to fool emission testing in 11 million cars worldwide in a scandal that may cost it 18.2 billion euros (\$19.5 billion). Claims of rigging vehicles have also been made against Mercedes, which has denied the allegations.

Chrysler and its diesel technology partner Cummins Inc. hid from consumers that pollutants thought to have been broken down inside the diesel engines instead had a tendency to escape, almost doubling the emissions and reducing the vehicle's fuel efficiency, according to the lawsuit. The companies are accused of fraud, false advertising and racketeering in the complaint, filed Nov. 14 in U.S. District Court for the Eastern District of Michigan on behalf of the owners of almost 500,000 Dodge Ram model trucks.

The lawsuit against Fiat Chrysler -- created in 2014 through the merger of Chrysler and Fiat -- further calls into question the credibility of clean-diesel technology. Excessive emissions from the vehicles exposed the general public to noxious levels of smog, according to the consumer complaint.

The claims involving Dodge Ram pickups from 2007 and 2012 predate the first known sales of emissions-cheating vehicles by Volkswagen by two years.

The alleged fraud was prompted by a regulatory shift in 2001, according to the filing. Companies saw an opportunity for growth after the Environmental Protection Agency announced stringent new emissions standards for heavy-duty diesel engines effective 2010. Chrysler and Cummins bet they could leapfrog the industry and produce a vehicle to meet those standards three years ahead of schedule, according to the complaint.

To contact the reporter on this story: Kartikay Mehrotra in San Francisco at kmehrotra2@bloomberg.net

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